

PCU ACTIVATION

1. CHECK FOR ACTIVE COMMUNICATIONS WITH PCU

√NCS PCU Control = Enable, Initialized

2. APPLY POWER TO PCU Z13B(Z14B)

Z1: EPS:

Z1:EPS:RPCM:3B(4B)

sel

sel RPC 15

cmd Close

√Position - CI

3. PLACE PCU IN SHUTDOWN STATE

cmd Shutdown

NOTE

1. At this point, ground controllers should see telemetry indicating successful powerup.
2. Xenon preheating may require 10 to 200 hours before reaching nominal operating temperature and TBD will prevent the PCU start up sequence from proceeding until nominal operating temperature is reached.

4. COMMAND PCU TO STANDBY AND AUTONOMOUS OPERATING MODES

CAUTION

1. Both PCUs cannot be operating at the same time. One PCU should be placed in the autonomous operating mode and the other PCU either in Standby Mode or powered off.
2. If both PCUs are left operating, a differential potential may build up on the structural members of the station and cause electrical arcing and slow degradation of exposed surfaces.
3. This procedure is written to provide a safe configuration by placing one PCU in nominal operations and the second PCU in the Standby Mode.

Z1 EPS PCU 3B(4B)

sel

cmd PCU Z13B(Z14B) Standby Routine

√For a Standby Routine Complete message on PCU Display

√For PCU Mode/State = Standby

5. CONFIGURE THE PCU FOR NOMINAL OPERATIONS (DISCHARGE STATE)

cmd PCUZ13B(4B) Contactor On

√PCU Z13B(Z14B) Temp Xe Tank: 23 --- 52° C, (74 --- 126° F)

√PCU Z13B(Z14B) Press Xe Tank: 30 --- 3000 psi

√PCU Z13B(Z14B) Anode Vout: 0 --- 70 Vdc

√PCU_Z1(3,4)B_B_SPG_I_Intgrd: 0 --- 10 amperes

NOTE

The first PCU to start operations (come on-line) should be put in the Standby Operating Mode. Wait for the other PCU to come on-line and place it in the Standby Mode also unless the P6 Solar Arrays deployment is imminent. If one or more P6 Solar Arrays are deployed, one of the PCUs must be operating in the Autonomous Mode during insolar periods of the orbit.

6. COMMAND PCU Z13B(Z14B) FROM THE DISCHARGE MODE TO THE STANDBY MODE

cmd PCU Z13B(Z14B) Contactor OFF

√For the PCU to be in the Standby State on the PCU Display

7. REPEAT STEPS 1 --- 5 FOR SECOND PCU

NOTE

Leaves second PCU in Normal Operating Mode (Discharge State) with first PCU activated in the Standby Mode allowing the heater controller to maintain Xenon temperature within normal operating range.